

PRIMARY DIFFUSE LARGE B CELL LYMPHOMA OF TESTICULAR : A CASE REPORT

¹Stevan Kristian Lionardi, ²Nicholas Andrian Singgih, ³Lutfi Bagus.

¹ Faculty of Medicine and Health Sciences, Atma Jaya Catholic University of Indonesia, Jakarta.

² Bhakti Asih Hospital, Brebes.

³ Division of Urology, Bhayangkara TK.I R. Said Sukanto Hospital, Jakarta.

ABSTRACT

Objective: To report our experience in treating a case of Testicular non-Hodgkin Lymphoma. **Case(s) Presentation:** A 55-year-old man came to the urology outpatient clinic with complaints of an enlarged left painless testicle that was lumpy and heavy. Urological examination found left unilateral testicle enlargement testicle, the size measured 10x7x7 cm with firm borders, solid consistency, and no tenderness. The patient then was treated with left orchiectomy. Histology and Immunohistochemical examination found non-Hodgkin B cells (CD20+) high grade, non-GCB. **Discussion:** In this case, the patient was treated with orchiectomy followed by a CHOP chemotherapy regimen. However, there was an unusual presentation due to the suspicion of metastases through the findings of a tender lump in the left inguinal region which was further confirmed by histological and immunohistochemical examination. **Conclusion:** Primary testicular lymphoma with a subtype of DLBCL (Diffuse Large B-Cell Lymphoma) is a rare disease. Orchiectomy is the initial treatment option for Testicular non-Hodgkin Lymphoma followed by combination therapy of chemotherapy to improve the prognosis.

Keywords: Orchiectomy, testicular lymphoma, testicular tumors.

ABSTRAK

Tujuan: Melaporkan pengalaman kami dalam menangani kasus Limfoma Non-Hodgkin pada Testis. **Presentasi kasus:** Seorang laki-laki berusia 55 tahun datang ke poli rawat jalan urologi dengan keluhan pembesaran testis kiri yang mengganjal dan terasa berat tanpa disertai rasa nyeri. Pemeriksaan urologi ditemukan pembesaran testis unilateral kiri dibandingkan testis kanan, pada palpasi didapatkan ukuran 10x7x7 cm dengan batas tegas, konsistensi padat, dan tanpa nyeri tekan. Pada pasien kemudian dilakukan orkiektomi. Pemeriksaan histologi dan imunohistokimia menemukan non-Hodgkin B cells (CD20+) high grade, non-GCB. **Diskusi:** Pada pasien ini dilakukan orkiektomi yang dilanjutkan dengan kemoterapi regimen CHOP. Terdapat temuan tidak biasa yakni kecurigaan metastasis dari temuan benjolan yang terasa nyeri saat penekanan pada regio inguinal kiri yang kemudian dikonfirmasi melalui histologi dan imunohistokimia. **Simpulan:** Limfoma testis primer dengan subtipe DLBCL (Diffuse Large B-Cell Lymphoma) merupakan penyakit yang jarang ditemukan. Orkiektomi merupakan pilihan terapi awal untuk limfoma non-hodgkin testis yang dilanjutkan dengan terapi kombinasi dari kemoterapi untuk meningkatkan prognosis.

Kata kunci: Limfoma testis, orkiektomi, tumor testis.

Correspondence: Stevan Kristian Lionardi; c/o: Faculty of Medicine and Health Sciences/Atma Jaya Catholic University of Indonesia. Jl. Pluit Selatan Raya No.19, Penjaringan, Jakarta. Phone: +6281289374200. Email: stevanlionardi15@gmail.com.

INTRODUCTION

Primary Testicular Lymphoma (PTL) is a rarer form of extranodal non-Hodgkin's lymphoma. Extranodal Non-Hodgkin's Lymphoma (NHL) accounts for <5% of testicular malignancies and 1 to 2% of all cases of NHL.^{1,2} Men over the age of 60 are more likely to develop testicular non-hodgkin lymphoma.² Pathologically, 80 to 98% of PTL is diffuse large B-cell lymphoma (DLBCL), one of the

most heterogeneous types of non-Hodgkin lymphoma. Bilateral instances account for around 20% of all cases.¹ The initial step in early stage PTL treatment is orchiectomy. To enhance prognosis, a combination of adjuvant systemic chemotherapy, radiotherapy and prophylactic intrathecal chemotherapy should be considered to improve prognosis. While testicular non-hodgkin's lymphoma (TNHL) has a generally dismal prognosis.^{3,4}

CASE PRESENTATION

A 55-year-old man presented to urology outpatient clinic Bhayangkara TK.I R. Said Sukanto Hospital with symptoms of a lumpy and heavy testicle without any tenderness. Both testes were initially the same size, however the patient noticed a little increase in the size of this left testicles during the previous two months followed by an increase in the last three weeks. The patient is a truck driver who drives a cross-city trip where the patient felt that the discomfort is getting worse while on the job.

The patient denied previous complaints of testicular enlargement in himself and his parents, as well as history of undescended testicles (UDT), and previous surgery. Complaints related to malignancy include low back pain, cough and shortness of breath, decreased appetite (anorexia), nausea and vomiting, bone pain, weight loss, and weakness (malaise) which the patient denied.

On physical examination, the patient's overall condition and vital signs were all within normal limits. On urological examination, left scrotum was discovered to be larger than the right scrotum, probing revealed a size of 10x7x7cm with firm borders, solid consistency, and no tenderness. No abnormalities were discovered during a standard blood test, urinalysis, or chest x-ray. The patient was admitted to the hospital and subsequently scheduled for left orchidectomy, a white homogeneous testicular mass that covers the entire testicle was found. The lesion affects just the testicle, not the epididymis.

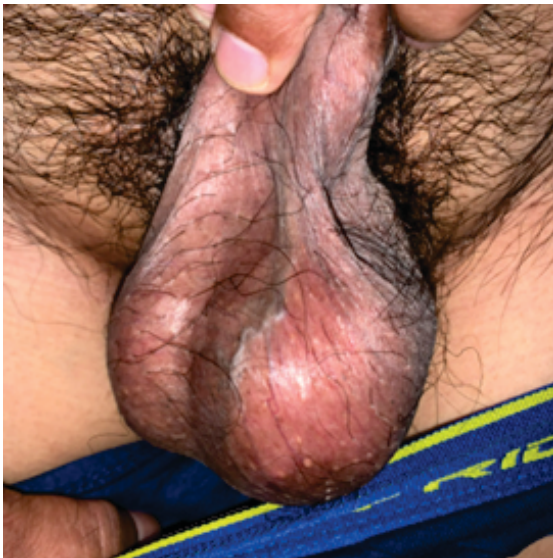


Figure 1. Clinical presentation of the patient.

Histopathological examination shows one piece of tissue split with a size of 8x5x5cm brownish color with a tumor mass size of 7x5x3cm. Tumor cells with pleomorphic nuclei, hyperchromatic, vesicular, irregular nuclear membranes, prominent daughter nuclei sometimes more than one, eosinophilic cytoplasm, and mitosis are found. Immunohistochemical examination found positive results on CD20, CD45, BCL6, Mum-1 and CD3, CD10, OCT4, CD117, SALL4, D240 were found to be negative. Ki-67 is reported to be positive in 90-95% of cases. The findings revealed a high grade non-Hodgkin B cells (CD20+), non-GCB characteristics.

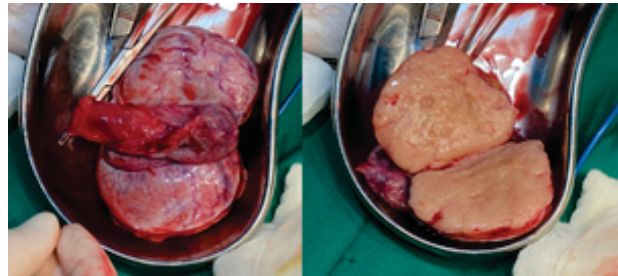


Figure 2. Gross appearance of specimen.

On 1 month follow-up after surgery, a lump measuring 2x2cm, round in shape, and tender on touch, with a soft consistency was discovered in the patient's left inguinal region. The patient's treatment was continued with an oncology surgeon using the CHOP chemotherapy regimen (Rituximab, Cyclophosphamide, Doxorubicin, Vincristine, Prednisone).

DISCUSSION

Primary testicular DLBCL (Diffuse Large B-Cell Lymphoma) is rare and spreads aggressively, generally associated with high rates of morbidity and mortality, with the most common presenting symptom being painless unilateral testicular enlargement. The findings were typically at a median age of 60 years, or 55 years in this case. Systemic B symptoms are found in either patients with Hodgkin's and non-Hodgkin's lymphoma such as fever, night sweats and weight loss (more than 10% within 6 months) can be found in about 25-41% of patients with advanced stages.⁴⁻⁶ However non of these symptoms are present in this patient.

Lymphoma has a tendency to spread by infiltrating the epididymis, spermatic cord, and

extranodal sites or locations other than lymphatic organs, such as the central nervous system, contralateral testis, subcutaneous skin, Waldeyer ring and lungs. In addition, the kidneys, liver, bone marrow, pleura and bones are less commonly affected.⁷ 1 month after orchiectomy, this patient developed a mass in the left inguinal area which is an uncommon finding because the testicular lymphatic system drains inter-aortocaval to retroperitoneal, whereas the inguinal and external iliac veins are drainage from scrotum. This can occur in cases if the tunica albuginea layer ruptures into the parietal layer of the tunica vaginalis and scrotum.⁸⁻⁹

Orchiectomy is the preferred treatment since it removes the malignant tumor while also providing a biopsy sample for further histopathological examination. Chemotherapy before surgery is not optimal due to the presence of a blood-testicular barrier, which makes it difficult for the medicine to reach the testes, at the same time testicular tumor cells express drug-resistant proteins. Treatment showed rediscovery of cancer cells at 2 years after orchiectomy surgery alone, even in patients with stage I.¹⁰ Then orchiectomy therapy followed by R-CHOP chemotherapy, radiotherapy (25 Gy), to intrathecal injection of central nervous system methotrexate could be considered.¹¹ This patient was treated with orchiectomy followed by CHOP chemotherapy regimen.

Histological examination of the specimen must be carried out to determine the diagnosis, the classification of DLBCL can determine the type of GCB (germinal center b-cell type) or Non-GCB through immunohistochemical analysis of CD10, bcl6 and MUM1 cells.¹¹ Non-GCB was the most prevalent kind discovered, with a high proliferation rate, whereas the GCB was more commonly found in HIV patients with a higher survival rate.⁷ Although CD10 was negative in this patient, positive results for bcl6 and MUM1 showed a high grade Non-GCB outcome.

Factors that could influence a better prognosis include younger age, localized tumor, tumor that has not spread to the epididymis or spermatic cord, and poor histological analysis staging.⁸ This patient's prognosis is poor because metastases were suspected after the discovery of a lump in the left inguinal region which was confirmed by histological and immunohistochemical investigations.

CONCLUSION

Finally, Primary testicular DLBCL is a rare disease with a dismal prognosis. Orchiectomy remains the preferred therapy since it can prevent the prognosis from deteriorating and allows for pathohistological analysis. R-CHOP chemotherapy, radiotherapy (25 Gy), and intrathecal injection of central nervous system methotrexate should be considered after orchiectomy.

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